

What is claimed is:

1 1. A communication method for conveying message data from a source to a destination,
2 the method comprising:

3 transmitting message data independently of an operating system of a communication
4 apparatus, said transmitting being performed at least in part by an operating system independent
5 access layer; and

6 transferring message data independently of hardware of the apparatus, said transferring being
7 performed at least in part by a device independent access layer.

8 2. The method of claim 1, the apparatus forming a shared bus topology for intershell
9 messages.

10 3. The method of claim 1, the apparatus forming a star bus topology for intershell
11 messages.

12 4. The method of claim 1, further comprising:
13 processing internal communications within the apparatus with an operating system portion
14 of the apparatus; and
15 processing external communications to and from the apparatus with a hardware portion of
16 the apparatus.

5. The method of claim 1, further comprising performing said conveying of message data from the source to the destination when the source and destination are both on a first shelf of the apparatus, and when the source is on the first shelf and the destination is on a second shelf of the apparatus, and when the source is on a first card of the second shelf and the destination is on a second card on the second shelf, and when the source is on the first shelf and the destination is external to the apparatus and not on any one of the shelves.

6. A communication apparatus for transferring message data from a source to a destination, the apparatus comprising:

an operating system portion of the apparatus processing internal communications within said apparatus independently of an operating system of said apparatus; and

a hardware portion of the apparatus processing external communications to and from said apparatus independently of hardware devices in said apparatus.

7. The apparatus of claim 6, further comprising a shared bus topology for intershelf messages.

8. The apparatus of claim 6, further comprising a star bus topology for intershelf messages.

1 9. The apparatus of claim 6, further comprising:

2 a first shelf including at least a first card; and

3 a second shelf including at least a second card and a third card;

4 said apparatus performing said transferring of message data from the source to the destination

5 when the source and destination are both on said first shelf, and when the source is on said first shelf

6 and the destination is on said second shelf, and when the source is on said second card and the

7 destination is on said third card, and when the source is on said first shelf and the destination is

8 external to said apparatus and not on any one of said shelves.

1 10. A computer storage medium having stored thereon a set of instructions implementing

2 a method for conveying message data from a source to a destination, said set of instructions

3 comprising one or more instructions for:

4 transmitting message data independently of an operating system of a communication

5 apparatus, said transmitting being performed at least in part by an operating system independent

6 access layer; and

7 transferring message data independently of hardware of the apparatus, said transferring being

8 performed at least in part by a device independent access layer.

1 11. The storage medium of claim 10, the apparatus forming a shared bus topology for

2 intershelf messages.

1 12. The storage medium of claim 10, the apparatus forming a star bus topology for
2 intershelf messages.

1 13. The storage medium of claim 10, further comprising:
2 processing internal communications within the apparatus with an operating system portion
3 of the apparatus; and
4 processing external communications to and from the apparatus with a hardware portion of
5 the apparatus.

1 14. The storage medium of claim 10, further comprising performing said conveying of
2 message data from the source to the destination when the source and destination are both on
3 a first shelf of the apparatus, and when the source is on the first shelf and the destination is
4 on a second shelf of the apparatus, and when the source is on a first card of the second shelf
5 and the destination is on a second card on the second shelf, and when the source is on the
6 first shelf and the destination is external to the apparatus and not on any one of the shelves.